




# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,564	07/30/2002	Vincent Costes	3401-4035	6868
27123	7590	08/26/2004	EXAMINER	
MORGAN & FINNEGAN, L.L.P.			CHANG, AUDREY Y	
3 WORLD FINANCIAL CENTER			ART UNIT	
NEW YORK, NY 10281-2101			PAPER NUMBER	
			2872	

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 10/070,564	<b>Applicant(s)</b> COSTES, VINCENT	
	<b>Examiner</b> Audrey Y. Chang	<b>Art Unit</b> 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____<br>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)<br>6) <input type="checkbox"/> Other: _____ |
|---|--|

## DETAILED ACTION

### *Remark*

- This Office Action is in response to applicant's amendment filed on June 23, 2004, which has been entered into file.
- By this amendment, the applicant has amended claims 1-4 and 6-7.
- Claims 1-7 remain pending in this application.

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the amended feature concerning the two respective angles of incidence recited in amended claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

*Response to Amendment*

2. **The amendment filed June 23, 2004** is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: **claim 1 has been amended** to include the feature of “at two different moments”. The specification and the claims fail to teach what are these “two moments”.

Applicant is required to cancel the new matter in the reply to this Office Action.

*Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The reasons for rejection based on the newly added features are set forth in the paragraph above.

*Claim Objections*

5. **Claims 1-7 are objected to because of the following informalities:**

(1). **The amended claim 1** recites the phrase “light beams of an object to observe along two respective angle of incidence  $\theta_1$  and  $-\theta_1$ ” is confusing and indefinite since it fails to teach the incident angles are measured with respect to what. The angles are now arbitrarily defined.

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(2). **Claim 1 has been amended** to include the phrase “at two moments” that is confusing and indefinite since it is not clear what are these moments.

(3). The phrase “the two observed directions of incidence having an angle  $\theta_1$  and  $-\theta_1$ ” recited in the **amended claim 6** is confusing and indefinite since it is not clear what is considered to be the observed direction and how could it be the same of the incidence angles of the light on the primary mirror. The light beams have deflected and reflected by the various mirrors and it is questionable that the direction of the observation which normally relates the observer is at the same angle as the angle of incidence.

(3). Claim 7 is incomplete since it is not clear what are the structural and logical relationships between the stereoscopic image acquisition means and the satellite. Also the phrase “said stereoscopic means” is confusing and indefinite since it lacks proper antecedent basis from its based claims.

***Appropriate correction is required.***

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1-2, 4-6 and 7 dependent from all of them are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Frosch et al (PN. 4,101,195).**

***Claims 1-7 have been amended significantly, accordingly new grounds of rejections are necessitated by the amendments and are set forth in the paragraphs below.***

Frosch et al teaches a *telescope*, which is an *optical observation device*, that is comprised of a *primary mirror* (10, Figure 2), that receives incident light beam (36) parallel to its optical axis, a *secondary mirror* (16) located at the optical axis and between the primary mirror and the focal point of the primary mirror for receiving the incident lights reflected from the primary mirror along two directions and reflecting them to a *tertiary mirror means* (40 and 20) along two directions that are symmetrically off set and distinct from the optical axis of the primary mirror. The tertiary mirror means reflects the two light beams to form images on the image plane (32), where a *camera* (34) serves as the *image acquisition means* is located, (please see Figure 2, columns 2-3). As demonstrated by Figure 2, Frosch et al teaches that the lights (36), from an object, incidents on the primary mirror at *two incident angles*. It is implicitly true that since the primary mirror is curved, the top incident light and the bottom incident light will have incident angles, measured with respect to the normal of the mirror, with the same magnitude but opposite in sign due to the fact that one being above and the other being below the normal of the mirror. In Figure 2, Frosch et al also teaches explicitly that the primary mirror (10) and the secondary mirror (16) are dimensioned in such a manner that the light beam, which are incident on the primary mirror with respective angles, are focused respectively on the tertiary reflection means. It is implicitly true that the incident light (36) reflected from the primary mirror will be reflected by the secondary mirror following two optical path that are corresponding to the two incident angles of the incident lights and the two light beams are focused onto the mirror element (20) of the tertiary mirror means via two optical paths (i.e. via two different second of mirror 40). As demonstrated in Figure 2, the incident light (36) incident on top and bottom of the primary mirror appears to be symmetrical with respect to the optical axis of the mirror.

Frosch et al teaches that the primary mirror is an ellipsoid but it does not teach explicitly, that the mirror is a parabolic. However for the Cassegrain telescope design (i.e. with the primary and second mirror arrangement taught by Frosch et al), to use parabolic mirror as alternative mirror means for the primary mirror is very well known in the art, since the idea is to use a primary mirror with definite focal

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points that is in cooperated with a secondary mirror placed between the primary mirror and its focal point, to collect incident light beams to focus on the designated focal point. Such modification would therefore have been obvious matters of design choice to one skilled in the art for the benefit of using a different mirror design to achieve the same function, namely forming images on the image plane.

With regard to claim 2, the reflection of the light beams by the secondary mirror is symmetrically with respect to the optical axis of the primary mirror, (please see Figure 2).

With regard to claim 4, Frosch et al teaches that the tertiary mirror means comprises a common mirror (20) and two plane mirrors (40) for directing the two light beams to the image plane. Frosch et al teaches that the common mirror (20) is a curved mirror and the two mirrors (40) are plane mirrors. Although this reference does not teach that the common mirror is plane mirror and the two mirrors (40) are curved, such modifications are considered to be obvious matters of design choices to one skilled in the art for both arrangements achieve the same function namely receives the two image light beams from secondary mirror along two directions to form images at the image plane or the camera.

With regard to claim 5, the primary mirror includes a central opening (11, Figure 2) to allow the reflected light from the secondary mirror to pass through.

With regard to claim 6, as demonstrated by Figure 2, the secondary mirror forms two intermediate images at the central opening of the primary mirror.

With regard to claim 7, Frosch et al teaches the optical observation could be a telescope but it does not teach explicitly that it is a stereoscopic observation system comprising a satellite. However since the claim also **fails** to provide the logical and structural relationship among the elements claimed such feature is therefore broadly examined as one can certainly utilized the telescope with a satellite. Also as demonstrated by Figure 2, Frosch et al teaches that the images formed on the image plane of the camera (34) are at two different positions, which provides two perspectives of the images. This suggests that the telescope can be applied to take stereoscopic images.

**8. Claims 3 and 7 dependent therefrom are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Frosch et al as applied to claim 1 above, and further in view of the German Patent Publication (DE 43 07 831 A1).**

The optical observation device taught by Frosch et al as described for claim 1 above has met all the limitations of the claims. This reference teaches to use a tertiary mirror means to reflect the light beams to a camera. However it does not teach explicitly that the tertiary mirror means includes two plane mirrors and two curved mirrors with arrangement set forth in the claims. German patent publication (831') discloses a Cassegrain mirror arrangement wherein the tertiary mirror means includes two sets of plane mirrors as shown in the Figure A on page 7, to receive the two image light beams from the secondary mirror along two directions to focus them on the image plane respectively. It would then have been obvious to one skilled in the art to apply the teachings of patent publication ('831) to modify the tertiary mirror means of Frosch et al to use two sets of mirrors as *alternative means* to achieve the image acquisition for the benefit of providing different design for the observation device.

With regard to claim 7, Frosch et al teaches the optical observation could be a telescope but it does not teach explicitly that it is a stereoscopic observation system comprising a satellite. However since the claim also fails to provide the logical and structural relationship among the elements claimed such feature is therefore broadly examined as one can certainly utilized the telescope with a satellite. Also as demonstrated by Figure 2, Frosch et al teaches that the images formed on the image plane of the camera (34) are at two different positions, which provides two perspectives of the images. This suggests that the telescope can be applied to take stereoscopic images.



*Response to Arguments*

9. Applicant's arguments filed on June 23, 2004 have been fully considered but they are not persuasive. The amended claims have been fully considered and they are rejected for the reasons stated above.

10. In response to applicant's arguments, which states the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the image acquisition means is to acquire stereoscopic images and two images generated and formed at the image plane from the telescope are stereoscopically related) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

11. In response to applicant's arguments, which state that the cited Frosch reference does not teach or suggest the features recited in paragraph 2 page 9 of the remark, the examiner respectfully disagrees and asks the applicant respectfully to study the cited Frosch reference more carefully and to read the reasons for rejection set forth in the paragraph above.

12. In response to applicant's arguments, which state that the cited Frosch reference and German publication do not teach a stereoscopic observation system in combination with a satellite, the examiner respectfully disagrees since the instant application **also fails** to disclose a **definite and workable** stereoscopic observation system in combination with a satellite. The claimed combination is therefore really arbitrary.

*Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent issued to **Bugiel et al (PN. 6,050,194)** teaches a common Cassegrain telescope design that includes a parabolic primary mirror.

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14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 571-272-2309. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Audrey Y. Chang*

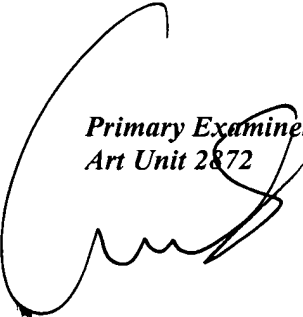
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A. Chang, Ph.D.

*Primary Examiner*  
*Art Unit 2872*

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